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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,572	01/24/2002	Hideto Ohnuma	740756-2422	3447

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EXAMINER	
KENNEDY, JENNIFER M	

ART UNIT	PAPER NUMBER
2812	

DATE MAILED: 10/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	10/053,572	OHNUMA, HIDETO	
	Examiner	Art Unit	
	Jennifer M. Kennedy	2812	

--Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 06 October 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☐ The a)☐ affidavit, b)☐ exhibit, or c)☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: 1-36.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☒ Other: see attachment

Response to Amendment

In view of Applicant's amendment to the claims, objection of claims 23 and 28 is withdrawn.

Applicant's arguments filed October 6, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case the examiner points to final office action sent July 3, 2003 on page 3 last paragraph and extending to page 4 where motivation is set forth. The examiner maintains that it would have been obvious to form the oxide film of Zhang et al. by the method of Ohtani et al. since it is a known alternative method of forming an oxide and as Ohtani et al. teaches this method improves the surface characteristics of the underlying film.

In response to applicant's argument that the effect of Ohtani et al. method is different than the effect of the pretreatment process of the application at hand, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the

differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's argument that the effect of Ohtani et al. method is different than the effect of Zhang oxide film, the examiner maintains that the method of Ohtani et al. forms an oxide film and the method of Zhang et al. forms an oxide film and thus the effect is the same. Since it is clear that the method of Ohtani et al. would form an oxide there is an expectation of success in the method of Zhang, which requires an oxide.

Applicant also argues examiner' inherency statement. The examiner maintains that the pretreatment terminates dangling bonds on a surface of the semiconductor film with oxygen. The amorphous silicon of Ohtani is oxidized by illuminating the substrate with a UV light in an oxygen ambient. It is known that the silicon oxygen bond has a higher bond energy than a silicon hydrogen bond and thus, silicon would preferentially bond with the oxygen molecule. Therefore the dangling bonds (Si-H) of the amorphous silicon will react with the oxygen provided to form silicon oxide, thus terminating the dangling bonds.

Again, as explained in the applicant's specification the termination of bonds in the present application occur with oxygen. The examiner points out that the pretreatment as taught by Ohtani to form the chemical oxide treats the surface of the substrate with oxygen (see column 2, lines 44-46), thus the pretreatment inherently terminates dangling bonds on the surface of the semiconductor film with oxygen. The examiner notes that Ohtani et al. discloses the same conditions and steps as that of the

applicant's disclosure with respect to forming the oxide. Applicant has not provided any required conditions for forming the oxide that would terminate the dangling bonds other than the presence of oxygen.